

Hist. Nat. 3: 39. 1834; Hook. f., Fl. Brit. India 6: 511. 1893; Prain, Bengal Pl. 2: 1107. 1903. (Araceae).

Tuberous, erect, stemless herbs; tuber up to 2 cm diameter, sub-globose. Leaves radical, up to 8.0-15.0 x 2.0-6.0 cm, of variable width, ovate-oblong or lanceolate, acute or acuminate, cordate at base, hastately 3-lobed or tripartite, rarely entire, long petioled, reticulately veined, green above, glaucous beneath. Petiole 10.0-15.0 cm long, base sheathing. Spathe up to 20 cm long (including the tail), lurid red, papillose within; limb of spathe with short lanceolate base produced into a very long, slender tail. Peduncle slender, up to 15 cm long. Spadix shortly stipitate, appendage produced into a long filiform tail, a little longer than spathe. Male inflorescence up to 6 mm long, cylindrical; yellow. Female inflorescence sub-globose. Neuters above female inflorescence few, clavate or obovoid with purple tip, those above the male subulate, white. Anthers minute, yellow. Ovary clavate green. Berries ovoid, 1-2 seeded; seeds globose, albuminous.

Not common; in shady moist localities and

grassy waste places.

Fl. & Fr.: July-September.

Distribution: India, Bangladesh, Myanmar, Thailand, Cambodia, Vietnam, Malaysia and Indonesia.

Specimens examined: Jashapada, Cuttack district, Orissa, 17.vii.1999, P.C. Panda 6675; Bhubaneswar, Khurda district, Orissa, 17.vii.1999, S.C. Jena, 6671.

Illustration: Wight, Icon. t. 791. 1844.

Typhonium flagelliforme can be distinguished from its closely allied species *Typhonium trilobatum* in the field by its short height, smaller and shallowly lobed leaves, small and smooth tubers with a brownish-black skin and nature of the inflorescence. Both occur in similar habitat, but the former prefers relatively open places and soil having less organic materials.

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38. OBSERVATIONS ON THE GENUS *RADIOCOCCUS*, FAMILY CHLOROPHYCEAE, A NEW RECORD FOR INDIA

(With one text-figure)

Schmidle (1902) established the genus *Radiococcus*, a chlorococcalean. This genus is widely reported from Belgium, Germany, England (Schmidle 1902) and U.S.A. (Smith 1950). According to Philipose (1967), three species of *Radiococcus* are known to occur, which are not yet reported from India. Although Singh *et al.* (1953) have reported an alga from Allahabad, which they have identified as *Radiococcus*

nimbatus, the description does not tally with that of Schmidle for this alga. The present paper describes *Radiococcus nimbatus*, which could be the first authentic report from India.

The alga was collected from Ramgarh Lake, Jaipur while surveying the freshwater algae of Rajasthan in September. It was found growing in slow running water in a shallow ditch with other chlorococcalean and blue-green algae. The

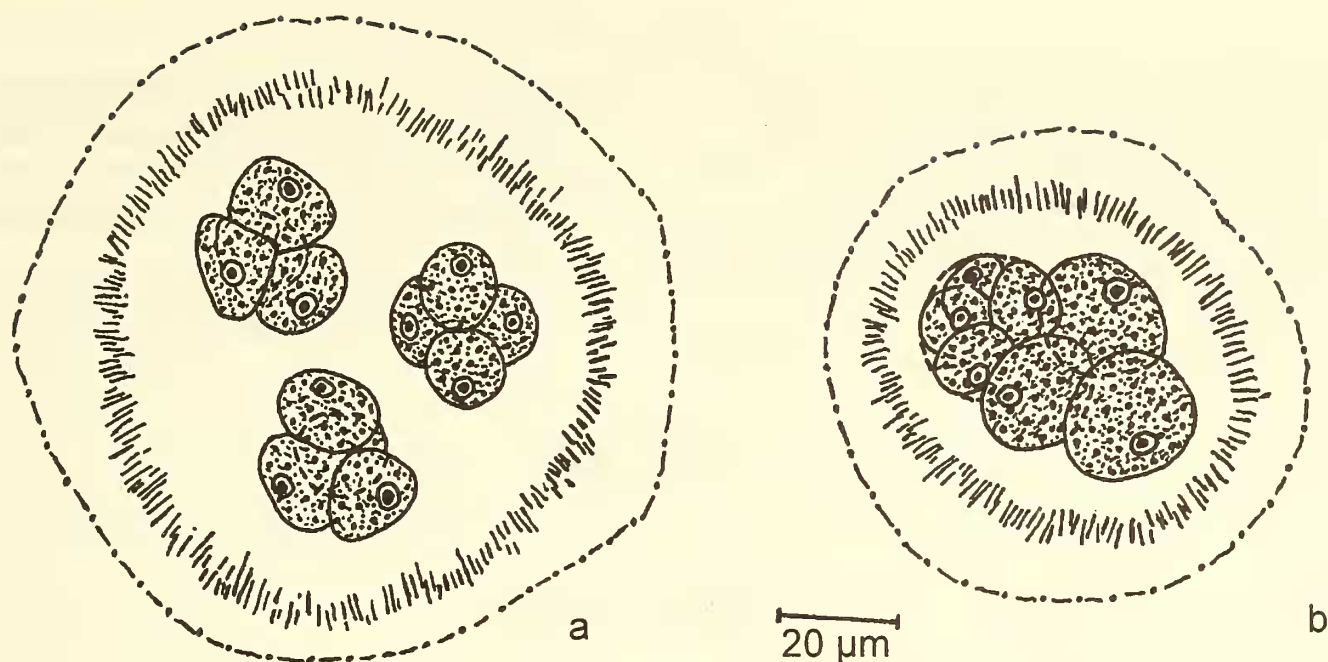


Fig. 1: *Radiococcus nimbatus*, a. Coenobia surrounded by mucilaginous sheath with fibrillar structures, b. Formation of autospores in a coenobium.

temperature of the water was 27 °C and pH 8.0. It was reared into a unialgal culture using standard microbiological technique and maintained in Bold's Basal Medium (Bischoff and Bold 1960) and Biphasic Medium (Pringsheim 1946).

The alga was a coenobium of four cells and was surrounded by a wide envelope of mucilage with radiate fibrillar structures (Fig. 1a). Cells in the coenobium were usually arranged in a tetrahedral or opposite, decussate manner and grouped in fours (Fig. 1a), but occasionally one-celled, two-celled and eight-celled stages were also observed. The four-celled coenobia measured 14-23.5 μm; the individual cells measured 7.8-14.0 μm. The cells were spherical, but sometimes turned oval due to mutual pressure. Each cell possessed a single parietal chloroplast with a pyrenoid, which was normally positioned towards the periphery.

Reproduction was performed by autospore formation (Fig. 1b) and each cell of the colony was capable of forming daughter coenobia. The autocolonies were liberated by tearing through the parent cell wall.

Schmidle (1902) and Smith segregated

Radiococcus from *Westella* based upon the characters pertaining to the gelatinous matrix and arrangement of cells in a coenobium. Different species of the genus have been characterized by their cell and colony size and contents. Singh *et al.* (1983) reported *Radiococcus nimbatus* from Allahabad, India. According to them, the cells were 3-8 μm in diameter. The Camera Lucida drawing showed a smooth mucilaginous envelope without fibrillate radiation. Schmidle (1902) compared the measurements and cell structure of *Radiococcus nimbatus* and *R. wildemanni*. He mentioned that cells of *R. wildemanni* measured 3-5 μm, while that of *R. nimbatus* measured 8-15 μm. The present alga, in all its features, resembles the type species described by Schmidle (1902). Therefore, it is the first record of the genus *Radiococcus* from India.

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MISCELLANEOUS NOTES

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CORRIGENDUM

JBNHS, Vol.98(3), p. 440, column 2, line 13

for: While sliding down a slope, its head got sandwiched between two or more tree trunks from which it could not recover itself (Jain and Saandeeep 2001).

Read: While sliding down a slope, its head got sandwiched between two or more tree trunks from which it could not recover itself. There were similar cases of strangulation records from Karnataka (Jain and Saandeeep 2001).